Serial No.: 08/934,057

Art Unit : 3722

Docket No. 12930.08



1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

14. (New) A combination fluid cooled cutting tool and coolant supply system wherein the combination comprises:

a fluid cooled cutting tool comprising:

at least one coolant orifice having a total flow area for applying a coolant to said cutting tool; and

a programmable, variable volume and pressure coolant supply system comprising:

at least one fluid pressure transducer for monitoring the pressure of said coolant;

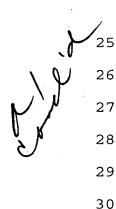
a pump having an inlet and an outlet for providing pressurized coolant to said coolant orifice;

an electrical AC pump motor operatively connected to said pump;

a coolant supply line, said coolant supply line extending between said pump outlet and said coolant orifice, to supply said coolant under pressure to said coolant orifice;

a coolant return line, said coolant return line extending between said cutting tool and said pump inlet, for returning said coolant to said pump inlet after said coolant exits said coolant orifice:

a coolant catch pan located between said cutting tool and said coolant return line, said coolant catch pan receiving said coolant exiting said coolant orifice and directing it into said coolant return line;



31

32

33

34

35

36

37

38

39

Serial No.: 08/934,057

Art Unit : 3722

Docket No. 12930.08

a coolant filter in said catch pan, to remove impurities from said coolant exiting said orifice prior to directing said coolant into said coolant return line;

a variable frequency drive electrically connected to said pump motor, said variable frequency drive providing AC power to said pump motor at various frequencies thereby controling the speed of said pump motor; and

a computer programmed with data of said total flow area of said coolant orifice, said computer monitors the coolant pressure by said pressure transducer;

wherein said computer determines a desired speed of said pump motor based on the coolant pressure and the total flow area of said coolant orifice and said computer controls said variable frequency drive to provide said pump motor with AC power at a frequency that results in said pump motor running at said desired speed.

REMARKS

By the present amendment, Applicant has added Claim 14. Claims 1-14 remain pending in the present application. Claims 1, 7 and 14 are independent claims.

The Office Action

In the recent Office Action (Paper No. 3) the Examiner rejected Claims 1-4 and 7-11 under 35 U.S.C. § 103(a) as being

LITMAN LAW OFFICES, LTD. P.O. BOX 15035 ARLINGTON, VA 22215 (703) 486-1000

14